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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/476,521    01/03/00    GROPP

H    RUM212

Horst M. Kasper  
13 Forest Drive  
Warren NJ 07059

PM82/1026

EXAMINER
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LUONG, V

ART UNIT	PAPER NUMBER
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3682

*//*

DATE MAILED: 10/26/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**09/476,521**

Applicant(s)  
**GROPP et al.**

Examiner  
**Vinh Luong**

Group Art Unit  
**3682**



☒ Responsive to communication(s) filed on 8/2/00

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-8 is/are pending in the application.

Of the above, claim(s) 8 is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-7 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on 1/3/00 is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on 7/31/00 is ☐ approved ☒ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☒ received in Application No. (Series Code/Serial Number) 09/016,597.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 8

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

Vinh T. Luong  
Primary Examiner

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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1. Applicant's election with traverse of Group I in Paper No. 10 is acknowledged. The traversal is on the ground(s) that the method cannot be used to make another and materially different product such as a crankshaft since claim 8 specifically states "a method for building a camshaft" and the product as claimed cannot be made by another and materially different process such as high pressure deformation. This is not found persuasive because assuming *arguendo* that the process steps recited in claim 8 may not be used to make other and materially different product such as a crankshaft, however, the product as claimed can be made by another and materially different process such as high pressure deformation of a plunger inside the pipe 1 to expand the pipe 1 radially in order to join or connect the pipe 1 with the cam 3. If applicants do not understand how high pressure deformation can provide, e.g., the connection between the pipe and the cam, applicants are respectfully urged to review numerous patents classified in Class 29, subclass 888.1 of the Office such as US Patent No. 5,038,450 and EP 320,789 issued to Swars cited in parent application. Please also see other methods that may be used to produce the product as claimed on pages 2 -5 of applicant's original specification.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification as shown on page 2 of the Restriction requirement on July 3, 2000, restriction for examination purposes as indicated is proper pursuant to M.P.E.P. 806.05(f). The requirement is still deemed proper and is therefore made FINAL.

2. Claim 8 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 10.

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3. The information disclosure statement filed July 3, 2000 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

4. The listing of references in the specification (e.g., page 5) is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

5. The Preliminary Amendment filed on February 23, 2000 (Paper No. 9) has been partially entered. For example, the insertion on page 6, line 11 of the specification has not been entered for the reasons stated below.

6. The Preliminary Amendment filed on February 23, 2000 (Paper No. 9) is objected to under 37 C.F.R. 1.121 because applicant did not precisely point out where the deletion or insertion is to be made. For example, applicant instructed that:

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(a) "Page 6, line 11, please delete 'piece 4' and substitute therefor --pieces 4 and 7--."

However, page 6, line 11 of the specification does not have the words "piece 4;" and

(b) "Page 6, line 12, after "pressed in." and before the insert of the amendment dated January 12, 1999." However, since the instant application is filed under 37 C.F.R. 1.60, therefore, the Amendment dated January 12, 1999 in the parent application Serial Number 09/016,597 was not carried over to the instant application.

7. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on July 31, 2000 have been partially approved.

(A) New Fig. 4 has been disapproved because:

(a) new Fig. 4 introduces new matter such as the end piece 4 as now shown. The original Fig. 2 shows that the inner diameter of the pipe 1 is varied: (1) at the junction of the end piece 4 and the pipe 1 as shown by applicant's phantom line; and (2) at referential numeral 1 (see attached Exhibit). However, Fig. 4 shows that the inner diameter of the pipe 1 is constant. The original disclosure does not convey the concept that the inner diameter of the pipe 1 is constant, thus, it is unsupported by the record as filed. *In re Anderson*, 176 U.S.P.Q. 331 (CCPA 1973); and

(b) new Fig. 4 is inconsistent with the description in Paper No. 9. The insertion on page 6, line 12 of the specification, states that the outer diameter of the end piece 4 is slightly larger than an inner diameter of the pipe 1. However, Fig. 4 shows that the outer diameter of the end piece 4 is equal to an inner diameter of the pipe 1.

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(B) The corrected Fig. 3 has been disapproved since it introduces new matter. The original drawings do not show the bearing rings. The corrected Fig. 3 now shows the bearing 6 which is identical to the cam 3. The showing and description of a specific type of bearing within a full spectrum of possible bearings is considered under the present disclosure to be new matter. *Cf., In re Smith*, 173 U.S.P.Q. 679 (CCPA 1972) and *Ex parte George*, 230 U.S.P.Q. 575, 578 (Bd. Pat. App. & Inter. 1986).

(C) The corrected Fig. 1 has been approved.

8. The original drawings are objected to because: (a) the drawings should show the plane upon which a sectional view such as Fig. 1 is taken; and (b) each part of the invention such as the outer diameter of the end piece should be designated by a referential numeral or character. Correction is required.

9. The amendment filed February 23, 2000 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is, *e.g.*, as follows:

(A) the insertion in line 9 on page 6 of the specification. The original disclosure does not convey the concept that the cam 3 shown in Fig. 1 has an opening diameter slightly smaller than an outer pipe diameter, thus, it is new matter. *In re Anderson, supra*;

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(B) the insertion in line 12 on page 6 of the specification. The original disclosure does not convey the concept that the outer diameter of the end piece 4 is slightly larger than an inner diameter of the pipe 1, thus, it is new matter. *In re Anderson, supra*; and

(C) the insertions in lines 13 and 14 on page 6 of the specification. The original drawings do not show the bearing rings. The corrected Fig. 3 now shows the bearing 6 which is identical to the cam 3. The showing and description of a specific type of bearing within a full spectrum of possible bearings is considered under the present disclosure to be new matter. *Cf., In re Smith*, 173 U.S.P.Q. 679 (CCPA 1972) and *Ex parte George*, 230 U.S.P.Q. 575, 578 (Bd. Pat. App. & Inter. 1986).

Applicant is required to cancel the new matter in the reply to this Office action.

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Amended claim 1 now calls for, *inter alia*, "a cam opening diameter *slightly smaller* than the outer pipe diameter" and "an inner ring diameter *slightly smaller* than the outer pipe diameter." However, the above limitations were not disclosed on the filing date. To the contrary, on the filing

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date, applicant's Figs. 1-3 show that: (a) the cam opening diameter is *equal to* the outer pipe diameter, and (b) the inner ring diameter is *equal to* the outer pipe diameter. The original disclosure does not convey the concepts "a cam opening diameter slightly smaller than the outer pipe diameter" and "an inner ring diameter slightly smaller than the outer pipe diameter," thus, they are new matter. *In re Anderson, supra.*

Similarly, new claims 6 and 7 claim "cams and bearing rings having an inner diameter *smaller* than the outer pipe diameter." However, the above limitations were not disclosed on the filing date. To the contrary, on the filing date, applicant's Figs. 1-3 show that the cams and bearing rings have an inner diameter *equal to* the outer pipe diameter. The original disclosure does not convey the concept "cams and bearing rings having an inner diameter *smaller* than the outer pipe diameter," thus, it is new matter. *In re Anderson, supra.*

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term such as "slightly smaller" in claim 1 is a relative term which renders the claim indefinite. The term "slightly smaller" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be



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reasonably apprised of the scope of the invention, e.g., it is unclear how small the cam opening diameter relative to the outer pipe diameter is considered to be "slightly smaller."

The term such as "conventional compression joints" in claims 1, 6 and 7 is vague and indefinite since it is not clear what type of compression joints are considered to be "conventional."

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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17. Claims 6 and 7, as best understood, are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over East German Patent No. 0152 972 (Pat. '972) described on page 3 *et seq.* of applicant's specification.

### **35USC 102(b)**

Regarding claims 6 and 7, Pat. '972 teaches a built-up camshaft comprising a pipe coated with a crystalline phosphate coating or a cement on an outer cylindrical surface and having outer and inner pipe diameters; cams and bearing rings (i.e., "other parts on the pipe" described on page 3 of applicant's specification) having an inner diameter and end pieces (i.e., "other parts on the pipe") having an outer diameter connected by means of compression joints. The cams and bearing rings of Pa. '972 inherently have an inner diameter *smaller* than the outer pipe diameter and end pieces of Pat. '972 inherently have an outer diameter bigger than the inner pipe diameter in order to be slipped and compressed to joint them together.

### **35 USC 103**

Pat. '972 teaches the invention substantially as claimed. However, Pat. '972 does not explicitly teach the dimensions of the cams, bearings, end pieces and pipe, etc.

It is common knowledge in the art to change the dimensions of the cams, bearings, end pieces and pipe, etc. of Pat. '972 such that the cams and bearing rings of Pa. '972 have an inner diameter *smaller* than the outer pipe diameter and end pieces of Pat. '972 have an outer diameter bigger than the inner pipe diameter in order to increase the friction resistance among the cams, bearings, end

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pieces and pipe to form compression joints. See *stare decisis* about the change in size/proportion cited in M.P.E.P. 2144.04.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to change the dimensions to change the dimensions of the cams, bearings, end pieces and pipe, etc. of Pat.'972 such that the cams and bearing rings of Pa.'972 have an inner diameter *smaller* than the outer pipe diameter and end pieces of Pat.'972 have an outer diameter bigger than the inner pipe diameter in order to increase the friction resistance among the cams, bearings, end pieces and pipe to form compression joints as suggested by common knowledge in the art.

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

19. Claims 1-7, as best understood, are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Seim et al. (Publication "*Erhöhung der Sicherheit gebauter . . .*" cited in EPO Search Report in the parent application).

### 35 USC 102(a)

Regarding claim 1, Seim teaches a built-up camshaft comprising a pipe coated by a joint coating on outer and inner cylindrical surfaces (Ibid., Table on page 289 and Fig. 12 on page 290) and having outer and inner pipe diameters; and having cam places, bearing ring places and pipe end places (e.g., Fig. 1, page 284 and Fig. 5 page 286); cams formed as rings with outer and inner

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cylindrical flanges (Fig. 12) and provided with the joint coating on an inner cylindrical surface of the inner flange and having a cam opening diameter. The cam opening diameter *inherently is slightly smaller* than the outer pipe diameter and the inner ring diameter *is inherently slightly smaller* than the outer pipe diameter (Fig. 6, page 287) in order to be slipped and compressed to joint them together.

Regarding claim 2, the joint coating of Seim is a joint-stable conversion coating (Fig. 12 and the English summary on page 285).

Regarding claim 3, the unorganic and compound joint coatings of Seim inherently include a cement coating

Regarding claim 4, at least one of the pipe, cams, end pieces and bearing rings are made of metal as seen by the drawing symbols for draftsmen in Fig. 12.

Regarding claim 5, the outer and inner cylindrical surfaces of the pipe is inherently partially mechanically machined. See, e.g., Fig. 10.

Regarding claims 6 and 7, Seim teaches a built-up camshaft comprising a pipe coated with a crystalline phosphate coating or a cement on an outer cylindrical surface and having outer and inner pipe diameters; cams and bearing rings (Fig. 9 and Table on page 289, and Fig. 12) having an inner diameter and end pieces having an outer diameter connected by means of compression joints. The cams and bearing rings of Seim inherently have an inner diameter *smaller* than the outer pipe diameter and end pieces of Seim inherently have an outer diameter bigger than the inner pipe diameter in order to be slipped and compressed to joint them together.

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**35 USC 103(a)**

Regarding claims 1-7, Seim teaches the invention substantially as claimed. See the rejection under 35 USC 102(a) above. However, Seim does not explicitly teach the dimensions of the cams, bearings, end pieces and pipe, etc. as claimed

It is common knowledge in the art to change the dimensions of the cams, bearings, end pieces and pipe, etc. of Seim such that, e.g., the cams and bearing rings of Pa.'972 have an inner diameter *smaller* than the outer pipe diameter and end pieces of Pat.'972 have an outer diameter bigger than the inner pipe diameter, etc. in order to increase the friction resistance among the cams, bearings, end pieces and pipe to form compression joints. See *stare decisis* about the change in size/proportion cited in M.P.E.P. 2144.04.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to change the dimensions to change the dimensions of the cams, bearings, end pieces and pipe, etc. of Seim such that the cams and bearing rings of Seim have an inner diameter *smaller* than the outer pipe diameter and end pieces of Seim have an outer diameter bigger than the inner pipe diameter, etc. in order to increase the friction resistance among the cams, bearings, end pieces and pipe to form compression joints as suggested by common knowledge in the art.

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Vogt et al. (Fig. 1), Beste et al. (Fig. 4) and some references cited in the parent case.

21. Applicant's arguments filed February 23, 2000 have been fully considered but they are not persuasive.

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### SPECIFICATION

The previous objection to the specification is withdrawn in view of applicant's amendment.

### 35 USC 112, SECOND PARAGRAPH

The rejection under 35 USC 112, second paragraph, is maintained due to the reasons set forth above.

### ART REJECTION

Applicant contended that Seim does not teach a pipe coated by a joint coating on its outer and inner cylindrical surfaces. The examiner respectfully submits that contrary to applicant's remarks, e.g., the English summary on page 285, the Table on page 289 and Fig. 12 of Seim plainly teach the joint coating on the surface of the shaft. The surface of the shaft of Seim inherently comprises the outer and inner cylindrical surfaces. For the reasons stated above, this rejection is maintained.

The rejections based on Eigi and Swars have been withdrawn, applicant's arguments with respect to Eigi and Swars have been considered but are moot.

22. Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is **(703) 305-7687**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see M.P.E.P. 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check. Responses submitted by facsimile transmission should include a Certificate of Transmission (M.P.E.P. 512). The following is an example of the format the certification might take:

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I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (703) 305-7687) on \_\_\_\_\_

(Date)

Typed or printed name of person signing this certificate:  
\_\_\_\_\_

\_\_\_\_\_  
(Signature)


If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and M.P.E.P. 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Luong whose telephone number is (703) 308-3221. The examiner can normally be reached on Monday-Thursday from 7:30 AM EST to 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci, can be reached on (703) 308-3668. The fax phone number for this Group is (703) 305-7687. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.

Luong

October 20, 2000



Vinh T. Luong  
Primary Examiner

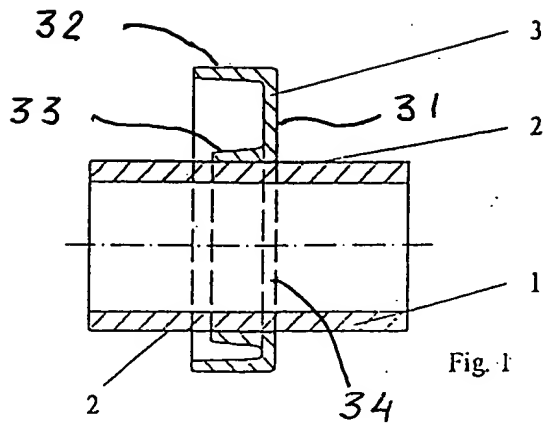


Fig. 1

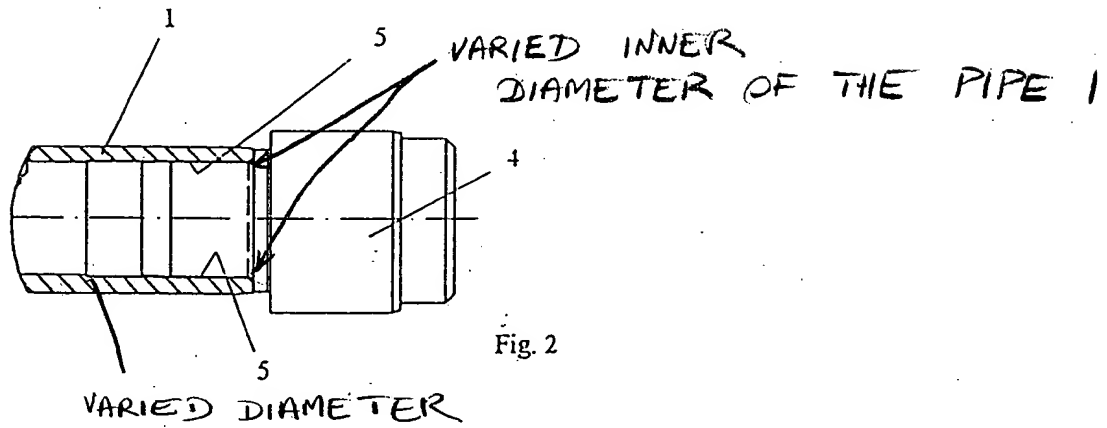


Fig. 2

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VL  
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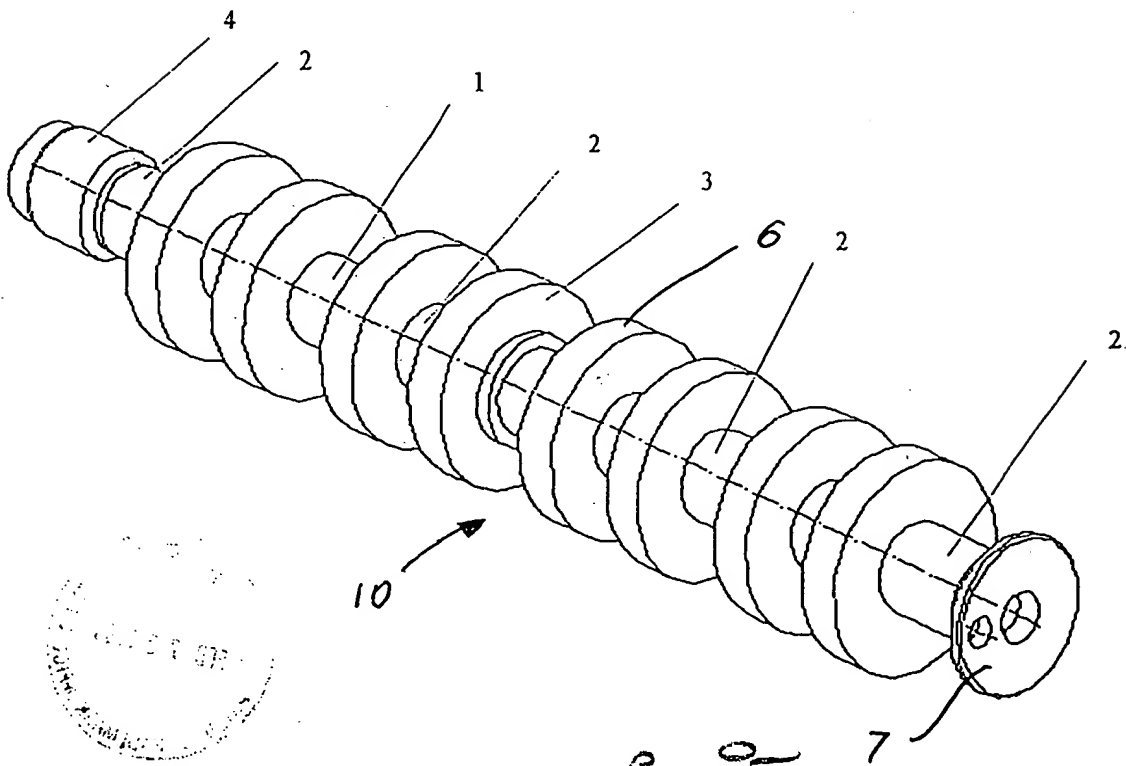
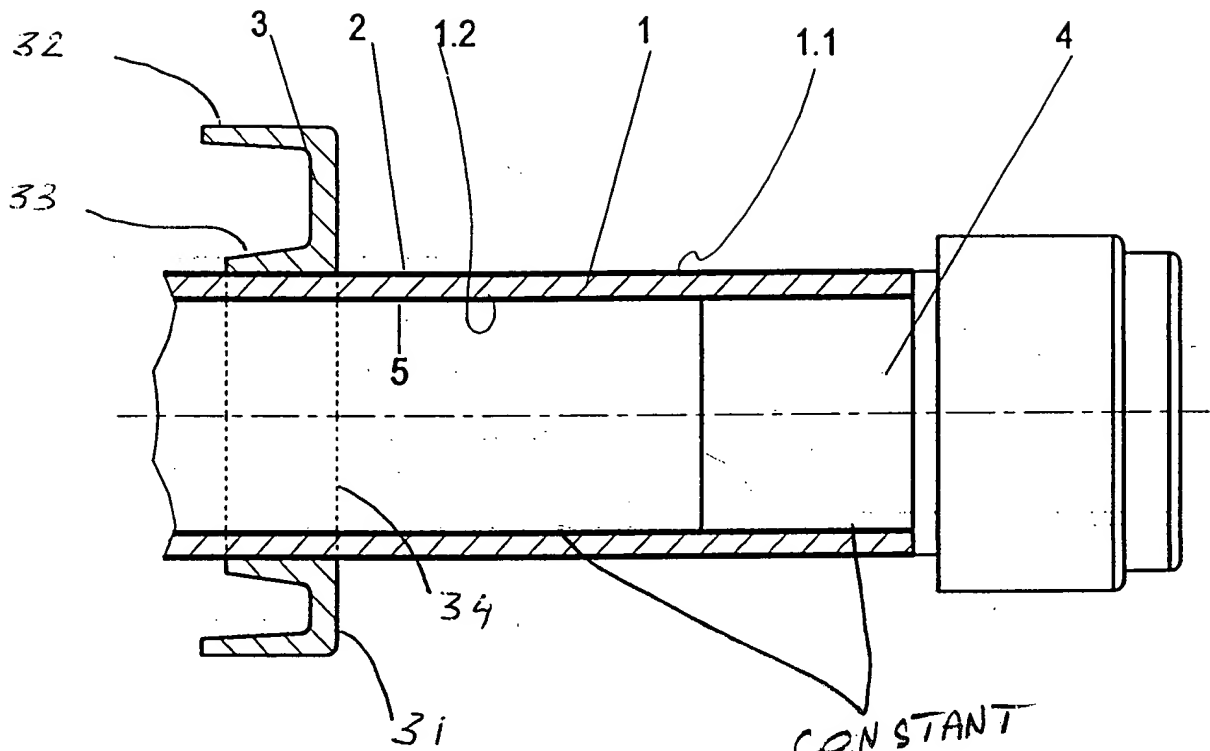


Fig. 3

EXHIBIT  
(PAGE 1 OF 2)





Disapproved  
VL  
10/20/00

Fig. 4

CONSTANT  
DIAMETER  
(NEW MATTER)

EXHIBIT  
(PAGE 2 OF 2)